

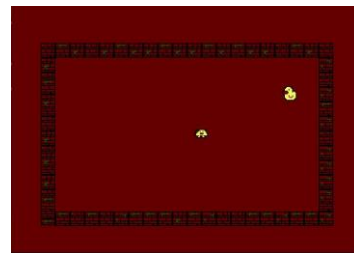
Taco vs Patos: making of

We were three students from University of Alicante with no previous knowledge of cpctelera with the challenge of building our first videogame from scratch ever.

We started by building a simple menu that had no options nor information, that allowed us to play the first and basic version, it just consisted of a Taco that moves according to the player's input and shoots a duck.



First basic menu



First functional version

We were amazed of what we could do in just one week, but we had no clue of all the work that we had ahead of us, that's when we started having problems, finding bugs and feeling stuck.

Bugs, bugs and more bugs building the system that would later be the core of the game, that weekend we had absolutely the same version of the code in 2 different machines, and only worked on one (it seems it was because the linking process was not deterministic).

However, these errors were not the only issue, we had just found out how our project had evolved and kept on evolving, becoming something totally different from the original idea. Usually design decisions like creating short levels that took us hours of work, transformed from a great occurrence to a useless waste of our time, since after testing the game, we could clearly see how the user would not enjoy it as we thought, not even us did.... So we kept on changing and changing the game, to the point that we had to stop and have an urgent meeting because sometimes, one hour of talk could save days of work and also we needed to settle a line of work so we didn't change too much the initial idea of the game, the bases of it.

One clear example of how the final result would change from the initial one, would be the lives system. We originally wanted the game to start all over when the player was hit (much like a **Pato Souls**). Of course this did not make any sense when we had four minute long levels, as we did then. Funny thing is that, at first this did not seem like a problem to us. It is due to the fact that we were testing only fragments of the game, and when you are developing your first game ever, you sometimes get stuck in a tunnel vision trying to build something, that makes you not see objectively the result of that process, you just want to get something done no matter what, instead of questioning several times if you are building the correct system.

Once we decided to do a complete walkthrough we were amazed at how unfair the system was. In the end, we had the main character gain a brief immunity and loose a life, without the need to start the level all over again, as we had established initially. This is a fine example of how software is designed with a purpose. We, as engineers sometimes **focus too much on the code**, but we can't forget, that, in the end, we are making a game. And the game **has to be fun**.

Once we had built the system, we needed to add levels to the game, enemies... etc. So we created several enemies with different behaviors. This was quite an enjoyable part of the process. We had the game engine built, so it was time to let our imagination fly. That's when we found out more problems... We had built too generic of a game engine. We could have enemies be invisible or unkillable, with different components and types... But we did not need such functionality. So we learned another important lesson: **design before implementing**. If we had known the specific kind of shooter game we wanted, with all the specific enemies and mechanics, the game engine would have performed much more smoothly.

Another fun aspect of the development was **music**. This task was assigned to only one member of the team, who had some background in musical education. The AY-3-8910 PSG is surprisingly limited. Only three channels, two mono and one stereo! To the game's composer, a fan of polyphony, this was sacrilege. He decided he had to make the music simple and catchy. A simple base, a simple harmonic base and a simple melody in a high pitch. The main problem was **everything had to be arpeggiated**, because only three sounds could be played at the same time. In the end, we had two simple catchy tracks with a few patterns.

Finally, once we had built the game and thought we had finished, we decided to add another mode to the game, what is now known as the survival mode. We first thought of the game as an adventure, where the main character (of course we are talking about Taco) had to kill enemies (patos) in order to pass to the next level. Finally Taco would either die, wish not, or killed all the enemies and passed all the levels, winning the game.

For that, we had to create waves of enemies that came to the main character, create a game with no levels and no chance of winning. Instead of that you got a highscore once Taco dies. We also had to now build a menu so the user can choose which mode you want to play and see the game controls so he/she can see beforehand which keys will be necessary to play the game.

With all this, we could now say that the game was and is finished, so... you ready for it? Press space!



Final menu